

# PROGRAM TIMER

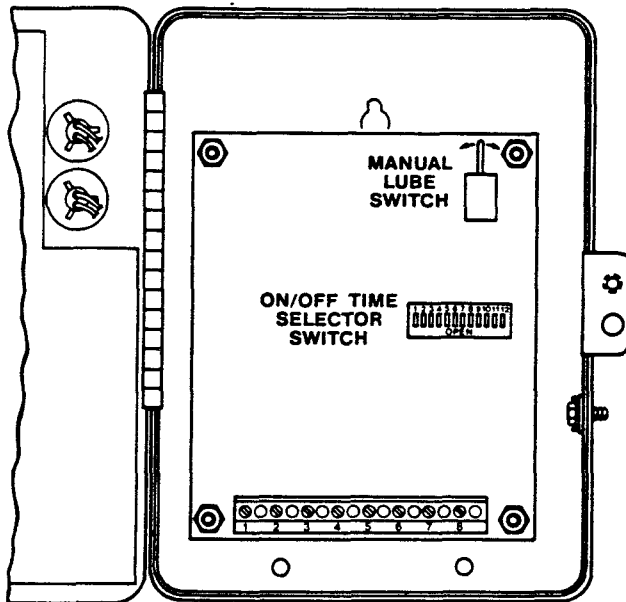
U.L. AND C.S.A. LISTED

# Model 84501

## Series "A"

### OPERATION

Model 84501 Program Timer is used to program the lubrication cycle frequency of single stroke lubricant pumps. When power to the timer is turned on (green L.E.D. will light), a pre-lube cycle will be initiated (amber L.E.D. will light). Pre-lube cycle will last approximately 40 seconds after which amber L.E.D. will go out. Subsequent lube cycles will be determined by the setting on the On/Off Time Selector rocker switches. "On/Off" times should be selected to meet system requirements (see Time Selection). During the "On" time the solenoid valve or load device (not part of timer) connected to terminals 7 & 8 is energized (amber L.E.D. will light).



### WIRE CONNECTIONS

**Power Source - Terminals 1 & 2.**

120 VAC, 50 or 60 Hz. Connect jumper wire between Terminals 3 & 4 and between Terminals 5 & 6.

230 VAC, 50 or 60 Hz. Connect jumper wire between Terminals 4 & 5.

**Solenoid Valve or Load Device - Terminals 7 & 8.**

Max. Load 120/240 VAC at 360 Volt-amperes.

**Remote Manual Lube Pushbutton Switch (Momentary N.O.) - Terminals 1 & 7.**

### SURGE SUPPRESSOR / SHIELDED WIRE

In some cases it may be necessary to use a surge suppressor when an inductive device is being controlled.

It is recommended that shielded wire be used on input/output lines to reduce problems with electrical noise.

### TIME SELECTION

Determine "On" time (time solenoid valve or load device is energized) and "Off" time (time between lube cycles) for system requirements. Select appropriate "On" time from Time Selection Chart below and set rocker switches #11 and #12 accordingly. Select "Off" time corresponding to "On" time and close the switch from #1 to #10 indicated in chart. Only one switch from #1 to #10 should be closed.

### MANUAL LUBE

Push the manual lube switch (inside enclosure) or optional remote manual lube switch and hold to initiate a lube cycle. Solenoid will remain energized as long as manual lube switch is actuated.

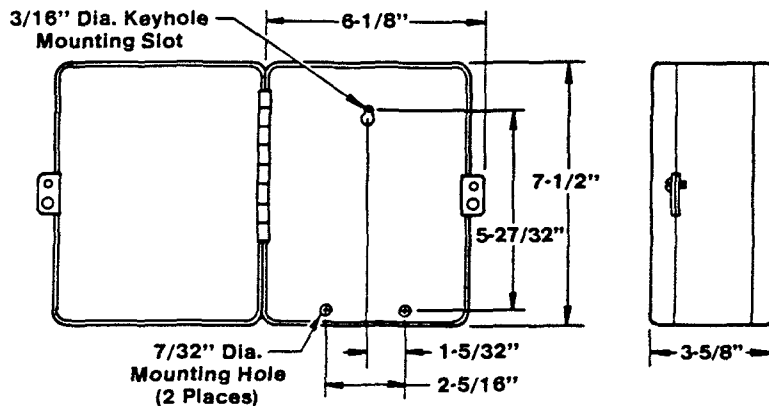
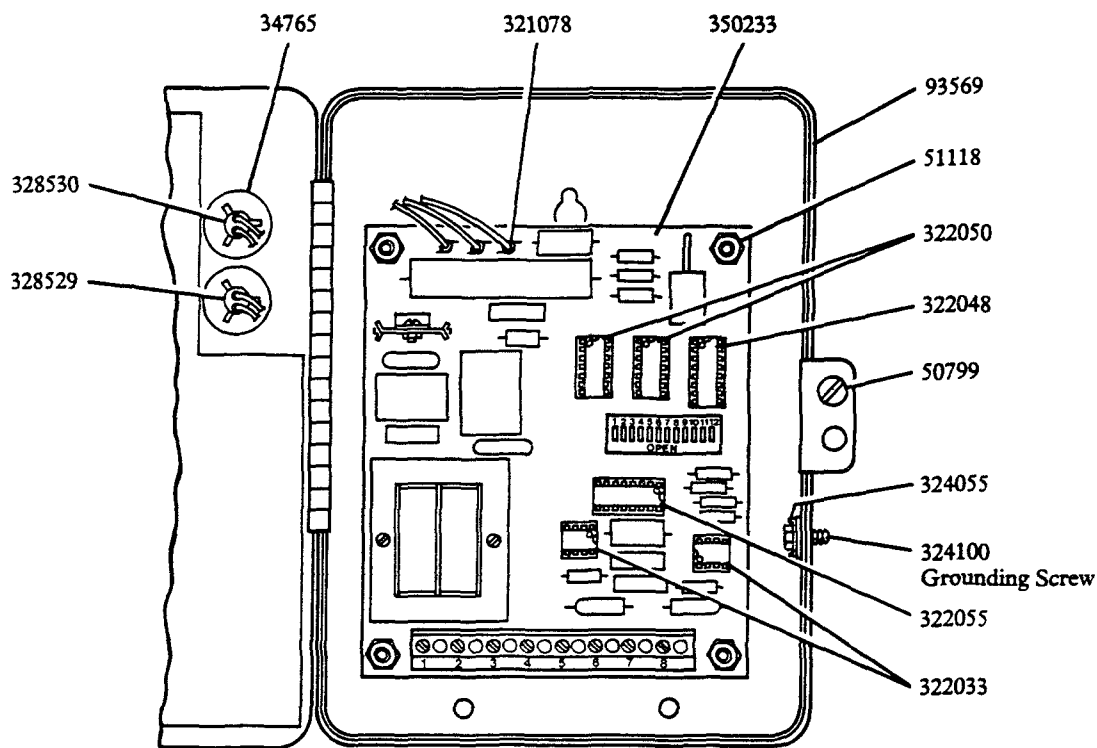
### TIME SELECTION CHART

ON TIME	OFF TIME	CLOSE SW. #	SWITCH #11	SWITCH #12	ON TIME	OFF TIME	CLOSE SW. #	SWITCH #11	SWITCH #12
10 Sec.	20 Sec.	1	CLOSED	CLOSED	1 Min.	2 Min.	1	OPEN	CLOSED
10 Sec.	40 Sec.	2	CLOSED	CLOSED	1 Min.	4 Min.	2	OPEN	CLOSED
10 Sec.	1 Min. 20 Sec.	3	CLOSED	CLOSED	1 Min.	8 Min.	3	OPEN	CLOSED
10 Sec.	2 Min. 40 Sec.	4	CLOSED	CLOSED	1 Min.	16 Min.	4	OPEN	CLOSED
10 Sec.	5 Min. 15 Sec.	5	CLOSED	CLOSED	1 Min.	32 Min.	5	OPEN	CLOSED
10 Sec.	10 Min. 30 Sec.	6	CLOSED	CLOSED	1 Min.	1 Hr. 4 Min.	6	OPEN	CLOSED
10 Sec.	21 Min.	7	CLOSED	CLOSED	1 Min.	2 Hr. 9 Min.	7	OPEN	CLOSED
10 Sec.	42 Min.	8	CLOSED	CLOSED	1 Min.	4 Hr. 18 Min.	8	OPEN	CLOSED
10 Sec.	1 Hr. 24 Min.	9	CLOSED	CLOSED	1 Min.	8 Hr. 35 Min.	9	OPEN	CLOSED
10 Sec.	2 Hr. 48 Min.	10	CLOSED	CLOSED	1 Min.	17 Hr. 9 Min.	10	OPEN	CLOSED
34 Sec.	1 Min. 8 Sec.	1	CLOSED	OPEN	1 Min. 24 Sec.	2 Min. 48 Sec.	1	OPEN	OPEN
34 Sec.	2 Min. 16 Sec.	2	CLOSED	OPEN	1 Min. 24 Sec.	5 Min. 36 Sec.	2	OPEN	OPEN
34 Sec.	4 Min. 30 Sec.	3	CLOSED	OPEN	1 Min. 24 Sec.	11 Min. 12 Sec.	3	OPEN	OPEN
34 Sec.	9 Min.	4	CLOSED	OPEN	1 Min. 24 Sec.	22 Min. 30 Sec.	4	OPEN	OPEN
34 Sec.	18 Min.	5	CLOSED	OPEN	1 Min. 24 Sec.	45 Min.	5	OPEN	OPEN
34 Sec.	36 Min.	6	CLOSED	OPEN	1 Min. 24 Sec.	1 Hr. 30 Min.	6	OPEN	OPEN
34 Sec.	1 Hr. 12 Min.	7	CLOSED	OPEN	1 Min. 24 Sec.	3 Hr.	7	OPEN	OPEN
34 Sec.	2 Hr. 24 Min.	8	CLOSED	OPEN	1 Min. 24 Sec.	6 Hr.	8	OPEN	OPEN
34 Sec.	4 Hr. 48 Min.	9	CLOSED	OPEN	1 Min. 24 Sec.	12 Hr.	9	OPEN	OPEN
34 Sec.	9 Hr. 35 Min.	10	CLOSED	OPEN	1 Min. 24 Sec.	24 Hr.	10	OPEN	OPEN



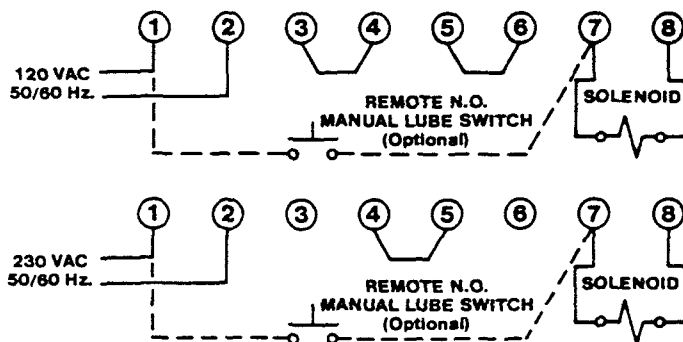
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## DIMENSIONS

## WIRING DIAGRAMS



**NOTE:** Numbers in circles represent corresponding numbers on terminal strip inside timer enclosure.

## IMPORTANT

Servicing of this unit should be done only by a qualified electronics technician or engineer trained in handling solid state equipment.

### WARNING:

Use proper tools when removing or replacing integrated circuits on the 350233 Circuit Board. When soldering or removing components on the 350233 Circuit Board always use a heat sink to prevent damage to other components.

## SERVICE PARTS

PART	QUAN.	DESCRIPTION
34765	2	Gasket
50799	1	Screw
51118	4	Locknut
93569	1	Timer enclosure
321078	3	Wire terminal (female)
*322033	2	Integrated circuit
*322048	1	Integrated circuit
*322050	2	Integrated circuit
*322055	1	Integrated circuit
324055	1	Washer
324100	1	Grounding screw
328529	1	Amber L.E.D. w/fastener
328530	1	Green L.E.D. w/fastener
350233	1	Circuit board assembly

\*Included in 237075 Repair Kit.

Repair kit also includes 237001 IC Insertion Tool & 237067 Extractor Tool.

## RETAIN THIS INFORMATION FOR FUTURE REFERENCE

When ordering replacement parts, list: Part Number, Description, Model Number, and Series Letter.

LINCOLN provides a Distributor Network that stocks equipment and replacement parts.

A list of Authorized Service Departments will be furnished upon request.